## REMARKS

This is intended as a full and complete response to the Office Action dated September 11, 2002 having a shortened statutory period for response set to expire on December 11, 2002. Claims 1-67 are pending in this application and are subject to a restriction requirement. Claims 27-67 stand rejected. Applicants confirm election of claims 27-67 with traverse. In this response, claims 1-26 have been cancelled as being drawn to a non-elected invention. Applicants reserve the right to prosecute the cancelled claims in a divisional application. In addition, claims 27, 53, and 54 have been amended, and new claims 68-76 have been added. The amendments are all supported by the specification and do not introduce new matter. Please reconsider the pending claims for reasons discussed below.

Claims 27-67 stand rejected under 35 U.S.C. § 102(e) as anticipated or, in the alternative, under 35 U.S.C. § 103(a), as obvious over *Small et al.* (U.S. Patent 6,117,783) on grounds that since *Small et al.* teaches a composition that uses a sufficient amount of a selectively oxidizing and reducing compound to produce removal of the metal layer and the dielectric material, it would be inherent that the polishing composition is barrier layer selective. Applicants respectfully traverse this rejection.

Claims 27-67 are directed to methods of using CMP solutions and are not directed to the composition of the CMP solutions by itself. The rejection erroneously focuses on the composition of the CMP solutions. Instead, examination of the claims should focus on the methods of using the CMP solutions.

*Small et al.* discloses CMP solutions which provide a differential removal between a metal, such as Al, Cu, or W, and a dielectric material, such as silicon oxide, spin on glass, boron phosphorous spin on glass, and phosphorus silicate glass. (*See,* Abstract; Summary of Invention; Col. 7, lns. 38-60; Col. 10, lns. 1-7.) *Small et al.* does not teach, show, or suggest CMP solutions used to remove barrier layer materials. Furthermore, *Small et al.* does not teach, show, or suggest CMP solutions to remove tantalum-comprising materials. Therefore, *Small et al.* does not teach, show, or suggest the methods as recited in the claims. As a consequence, Applicants respectfully submit that the claims are in condition for allowance and respectfully request allowance of the

claims.

In conclusion, the reference cited by the Examiner does not teach, show, or suggest the methods of the present invention. Having addressed all issues set out in the office action, Applicants respectfully submit that the claims are in condition for allowance and respectfully request that the claims be allowed.

Respectfully submitted,

Eddy J. Song
Registration No. 43,144
MOSER, PATTERSON & SHERIDAN, LLP
3040 Post Oak Blvd., Suite 1500
Houston, Texas 77056
Telephone: (713) 623-4844
Facsimile: (713) 623-4846
Attorney for Applicant(s)

## APPENDIX

27. (Amended) A method for selective removal of a tantalum-comprising layer from a substrate in chemical mechanical polishing, comprising:

applying a composition to a polishing pad, the composition comprising:

at least one reducing agent;

ions from at least one transitional metal; and

water[,]; and

polishing the substrate in presence of the composition to remove the tantalum-comprising layer.

53. (Amended) The method of claim 27, wherein during polishing of the substrate the tantalum-comprising layer is removed from the substrate at a ratio of tantalum-comprising layer to conductive material layer to dielectric layer between about 1:0:0 to about 1:0.2:0.2.

54. (Amended) The method of claim 27, wherein during polishing of the substrate the tantalum-comprising layer is removed from the substrate at a rate of at least about 250 Å/min.